

# STIC Search Report

# STIC Database Tracking Number: 182718

TO: Cam-Linh T Nguyen Location: RND 3C21

Art Unit: 2161

Tuesday, March 21, 2006

Case Serial Number: 09/741680

From: Lucy Park Location: EIC 2100

**RND-4B11** 

Phone: 571-272-8667

lucy.park@uspto.gov

# Search Notes

Dear Examiner Nguyen,

Here are the search results for your Fast & Focused search request on case number 09/741680. Please let me know if you have any questions about these or if you need any further information.

Lucy





# STIC EIC 2100 /827/8 Search Request Form

910.1	te would you like to use to limit the search?				
7/21 (66 Priority D	ate: i2/15/00 Other:				
Name Nguyen, Com Linh	Format for Search Results (Circle One):				
AU2161 Examiner #7892_1	PAPER DISK EMAIL Where have you searched so far?				
Room # RND- 36.21 Phone 2 4024	USP DWPI EPO JPO ACM IBM TDB				
Serial # 09 / 741, 680	IEEE INSPEC SPI Other				
Is this a "Fast & Focused" Search Request? (Circle One) (YES) NO  A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.					
What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.					
9	/ . 1				
- Administration function w.	the sensitive (injer, user)				
- " Security Officer" & no	ormal administrator				
STIC Searcher Lung Park	Phone 28667				
Date picked up 3/21/00 Date Complete	2/0.1				



# EIC 2100

Questions about the scope or the results of the search? Contact the EIC searcher or contact:

Anne Hendrickson, EIC 2100 Team Leader 272-3490, RND 4B28

/ol	luntary Results Feedback Form
>	I am an examiner in Workgroup: Example: 2133
>	Relevant prior art found, search results used as follows:
	102 rejection
	103 rejection
	Cited as being of interest.
	Helped examiner better understand the invention.
	☐ Helped examiner better understand the state of the art in their technology.
	Types of relevant prior art found:
	☐ Foreign Patent(s)
	<ul> <li>Non-Patent Literature</li> <li>(journal articles, conference proceedings, new product announcements etc.)</li> </ul>
>	Relevant prior art not found:
	Results verified the lack of relevant prior art (helped determine patentability).
	Results were not useful in determining patentability or understanding the invention.
Co	omments:

Drop off or send completed forms to STIC/EIC2100 RND, 4B28



<i>Ol</i> altavista <sup>*</sup> Web	Images	MP3/Audio	Video	News
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Family Filter: off Help

# **Advanced Web Search**

Build a	auerv	with
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all of these words:	database role	
this exact phrase:	multiple security levels	
any of these words:	sensitive user	
and none of these words		
SEARCH:  Worldwide C L	ISA RESULTS IN:   All languages C	English, Spanish

#### AltaVista found 17 results

High Assurance Multilevel Services For Off-The-Shelf Workstation **Applications** 

File type:PDF - Download PDF Reader

... sharing of sensitive information by users at multiple security levels ... obtained by several projects. including both database systems, e.g... classes [10] or mandatory role-based policies ... www.cs.nps.navy.mil/people/faculty/irvine/publications/older/MLS\_LAN\_nissc98.pdf More pages from cs.nps.navy.mil

# High Assurance Multilevel Services For Off-The-Shelf Workstation **Applications**

File type:PDF - Download PDF Reader

... sharing of sensitive information by users at. multiple security levels ... obtained by several projects. including both database systems, e.g... classes [10] or mandatory role-based policies ... csrc.nist.gov/nissc/1998/proceedings/paperF11.pdf More pages from csrc.nist.gov

# Protecting your network with firewalls, featuring Sun's SunScreen EFS firewall - SunWorld - January 1998

... are threatened. Multiple security levels will at ... system, data, and user levels. Security ... database server and the secure channel provides data privacy of proprietary or sensitive ... sunsite.uakom.sk/sunworldonline/swol-01-1998/swol-01-efs.html More pages from sunsite.uakom.sk

defense message system working group statehouse inn, montgomery al

... individual, or role (a global directory ... But Sensitive Messaging -Classified Messaging CENTRAL COMPONENTS: - DMS USER AGENT ... 000 Terminals) - Multiple Security Levels: -- UNCLAS ... www.mis.nps.navy.mil/~budden/xnplans/afplan/afdmsmtg More pages from mis.nps.navy.mil

Proposal to Establish the Northern Virginia Metacomputing Center ... distances so that the user is unaware of physical ... Census Bureau's census and survey database. Often the amount ... Because of the central role of information-intensive applications ... www.galaxy.gmu.edu/meta/metacomp.html

More pages from galaxy.gmu.edu

www2.cddc.vt.edu/www.eff.org/Activism/fed\_email\_policy\_omb.report Sally Katzen, Administrator, Office of Information and Regulatory Affairs (OIRA), of the Office of Management and Budget (OMB), chartered an interagency task force to address "Electronic Messaging Among Federal Agencies." ... user training programs in order to prevent, detect, and correct security problems. As with most information systems, internal threats, such as the misuse or release of sensitive ... www2.cddc.vt.edu/www.eff.org/Activism/fed\_email\_policy\_omb.report More pages from www2.cddc.vt.edu

DARPA - 61 Phase I Selections from the 99.1 Solicitation ... can play a unique **role** in the design of multifunctional ... objects and objects stored in a **database**. Image Corp, Inc ... sensor enables a remote **user** to "look around" and assess ... www.dodsbir.com/selections/abs991darpa.htm

More pages from dodsbir.com

Date:

packetstormsecurity.nl/docs/rainbow-books/NCSC-TR-002.txt

This approach can be used in conjunction with TDI developed systems or in the cases where the TDI does not apply. ... spirit of the "Trusted Database Management System Interpretation (TDI ... systems support highly sensitive and critical U.S. missions ... users must access multiple security levels in near ...

packetstormsecurity.nl/docs/rainbow-books/NCSC-TR-002.txt More pages from packetstormsecurity.nl

O by timeframe: Anytime

Result Pages: 1		Back To Top
Advanced Web Sear	ch	<u>H</u>
Build a query with		
all of these words:	database role	+ F1941.2
this exact phrase:	multiple security levels	
any of these words:	sensitive user	
and none of these words		
C Search with		
this boolean expression		Use terms such as AND, OR, NOT More>>
SEARCH:   Worldwide C U	SA <b>RESULTS IN: </b> All languages C <u>English, Spani</u>	<u>sh</u>

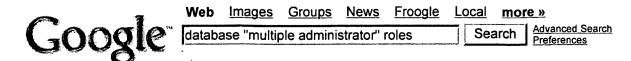
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Web

Results 1 - 10 of about 310 for database "multiple administrator" roles. (0.18 seconds)

[PDF] Microsoft PowerPoint - Lotusphere 2006 BES41 Preview.ppt
File Format: PDF/Adobe Acrobat - View as HTML
Support for Multiple Administrator Roles. • Group-based Administration. • Support for DB2 ... If database remotely installed, then insure that DB2 ...
www.blackberry.com/news/events/ pdfs/lotusphere\_2006\_bes41\_preview.pdf - Similar pages

<u>Secure Computing: Sidewinder G2 Enterprise Manager - Product overview</u> ... Distributed hierarchical administrator roles; Record locking circumvents ... SQL database architecture; Simultaneous, multiple administrator access ... www.securecomputing.com/index.cfm?sKey=1133&pf=1 - 12k - Cached - Similar pages

Secure Computing: Sidewinder G2 Enterprise Manager - Product overview Highly flexible SQL database architecture; Simultaneous, multiple administrator access; Organize appliances to mirror your network; Create unlimited, ... www.securecomputing.com/index.cfm?sKey=1133 - 38k - Cached - Similar pages [More results from www.securecomputing.com]

Cisco CNS Network Registrar Users's Guide Web Interface, 6.0 ...
Global administrator—Responsible for the Central Configuration Manager (CCM) database. You should limit access to this role. host-admin ...
www.cisco.com/en/US/products/sw/netmgtsw/
ps1982/products\_user\_guide\_chapter09186a0080154e53.html - 121k Cached - Similar pages

# [PDF] Global Administration

File Format: PDF/Adobe Acrobat - <u>View as HTML</u> administrative **roles** and access security, and monitors **database** changes and tasks. ... (Note, however, that you can also handle these **multiple administrator** ... www.cisco.com/univercd/cc/td/doc/ product/rtrmgmt/ciscoasu/nr/nr60/webui/03admin.pdf - <u>Similar pages</u>

## Needs Assessment

Security & Administration, **Multiple administrator roles** with many levels of privilege ... Data encrypted inside **database**. Tests & Quizzes, Built-in quizzes, ... caucuscare.com/inf\_needs.shtml - 19k - <u>Cached</u> - <u>Similar pages</u>

[PPT] Notes and Domino 6.5.1 What's New and How It Will Help You Win ... File Format: Microsoft Powerpoint - View as HTML

Programmability restrictions – control what applications can/can't do! Database signing and Execution Control Lists. Multiple Administrator Roles ...

www.sga.com/.../\$FILE/ Are%20you%20getting%20the%20most%20from%20your%

20Domino%20investment.ppt - Similar pages

# ChrisBallam.com: Chris Ballam's Resume

Duties include Web design, database design and modeling, ... and multiple Administrator sections with different user administration roles and access ... www.chrisballam.com/resume/index.htm - 29k - Cached - Similar pages

www.ORAsearch.com - Dedicated Career Site for Oracle professionals! Also Monitoring the health and server efficiency and DataBase Performance tuning is something I would ... Worked daily with multiple Administrator role for ... www.orasearch.com/ADIdocs5/ DetailOpen.cfm?detail\_id=192820 - 21k - Cached - Similar pages

ActivCard Secure Remote Access Solution (Two-factor 2005 ... ... delegation of multiple administrator roles if the situation calls for it. ... ActivCard provides an integrated database that controls both the tokens ... www.scmagazine.com/.../4c60c7ba-7b6e-4f1d-ae03-bbcb94ddb3ae/ activcard-secure-remote-access-solution-/ - 39k - Cached - Similar pages

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database "multiple administrator" rol Search

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(c) 2006 JPO & JAPIO
File 350: Derwent WPIX 1963-2006/UD, UM &UP=200619
         (c) 2006 Thomson Derwent
        Items
                Description
Set
       669919
                USER? ? OR ACCOUNT? ? OR USERNAME? ?
S1
                S1(3N)(SENSITIV??? OR CLASSIFIED OR RESTRICT??? OR SECRET -
S2
             OR SECRECY OR PRIVILEG??? OR PRIVATE OR PRIVACY OR SECUR???)
                ADMINISTRATOR? ? OR OFFICER? ? OR ADMIN? ? OR SYSADMIN? ? -
S3
        32499
             OR AUTHORITY OR AUTHORITIES
                S3(3N) (NORMAL OR REGULAR OR BASIC OR USUAL OR UNCLASSIFIED
S4
             OR (NON OR "NOT")()(SENSITIVE OR CLASSIFIED OR RESTRICT??? OR
             SECRET OR PRIVILEG??? OR PRIVATE OR SECUR???))
                S3(3N)(SPECIAL OR SECUR??? OR TOP OR HIGH??? OR SENSITIV???
S5
              OR CLASSIFIED OR RESTRICT??? OR SECRET OR SECRECY OR PRIVILE-
             G??? OR PRIVATE)
                (S3 OR AUTHORIZ??? OR AUTHORIS??? OR AUTHORIZATION? ? OR A-
S6 .
         8442
             UTHORISATION? ? OR SECURITY OR ACCESS) (3N) (LEVEL? ? OR TIER? ?
              OR ROLE? ? OR TYPE? ?)
S7
                S2 AND (S4 OR S5) AND S6
                S7 NOT AD=20001215:20031215/PR
S8
S9
                S8 NOT AD=20031215:20060321/PR
S10
            3
                S4 AND S5
S11
           74
                S2 AND (S4 OR S5)
S12
           62
                S11 NOT (S7 OR S10)
S13
           36
                S12 NOT AD=20001215:20031215/PR
S14
           30
                S13 NOT AD=20031215:20060321/PR
S15
       268717
                DATABASE? ? OR DATABANK? ? OR DATASTORE? ? OR DB OR DBMS OR
             RDBMS OR RDB OR DATA() (BASE? ? OR BANK? ? OR STORE? ?)
S16
                S15 AND S14
S17
         1601
                (S3 OR MANAGER? ?) (3N) (TWO OR THREE OR SECOND OR THIRD OR -
             NEXT OR ANOTHER OR ADDITIONAL OR MULTI OR MULTIPLE OR PLURAL?-
             ?? OR MANY OR SEVERAL OR NUMEROUS OR VARIOUS)
                $17 AND ($2 OR $4 OR $5 OR $6)
                S18 AND S15
S19
S20
                S19 NOT (S7 OR S10 OR S16)
S21
           94
               (S14 OR S18) AND IC=(G06F OR H04L)
S22
          80
                S21 NOT (S7 OR S10 OR S16 OR S20)
S23
                $22 NOT AD=20001215:20031215/PR
          61
S24
          56
                $23 NOT AD=20031215:20060321/PR
S25
          368
                S2 AND S6
S26
          63
                S25 AND S15
S27
          58
                S26 AND IC=(G06F OR H04L)
S28
          29
                S27 NOT AD=20001215:20031215/PR
          24
                S28 NOT AD=20031215:20060321/PR
S29
          23
                S29 NOT (S7 OR S10 OR S16 OR S20)
S30
S31
           54
                SECURITY()OFFICER? ?
S32
           8
                S31 AND S15
S33
                S32 NOT (S7 OR S10 OR S16 OR S20 OR S30)
? logoff hold
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21mar06 10:44:58 User259273 Session D346.5

File 347: JAPIO Nov 1976-2005/Nov (Updated 060302)

. .

9/5/3 (Item 3 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013032013

WPI Acc No: 2000-203864/200018

XRPX Acc No: N00-151628

Flexible DCE user management design method through GSO provides concept of policy object giving flexibility in specifying attributes and granting

admin users privileges for new functions
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC )
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week RD 429144 A 20000110 RD 99429144 A 19991220 200018 B

Priority Applications (No Type Date): RD 99429144 A 19991220

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

RD 429144 A 2 G06F-000/00

Abstract (Basic): RD 429144 A

NOVELTY - Policy object defines values for some DCE user related attributes which GSO server will refer to in creating DCE user, also indicates if these DCE user management functions are allowed via GSO or not, and if yes what **levels** of **admin** users will have authority to perform new functions. The object currently contains 3 pairs of attributes and values and can be expanded for other policies in the future.

USE - For providing flexible DCE user management through GSO. ADVANTAGE - Provides flexibility in specifying attributes and granting admin users privileges for the new functions, the concept of policy object is invented.

pp; 2 DwgNo 0/0

Title Terms: FLEXIBLE; USER; MANAGEMENT; DESIGN; METHOD; THROUGH; CONCEPT; OBJECT; FLEXIBLE; SPECIFIED; ATTRIBUTE; ADMINISTER; USER; NEW; FUNCTION

Derwent Class: T01

International Patent Class (Main): G06F-000/00

File Segment: EPI

# 9/5/4 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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010305330

WPI Acc No: 1995-206590/199527

XRPX Acc No: N95-161895

Certifying public keys of digital signature in secure communications system - requiring user to present authority for verification key PKU to check if user knows secret signing key associated with verification key

Patent Assignee: MICALI S (MICA-I)

Inventor: MICALI S

Number of Countries: 002 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5420927	A	19950530	US 94189248	Α	19940201	199527	В
WO 9521495	A1	19950810	WO 95US1327	Α	19950201	199537	
AU 9517394	Α	19950821	AU 9517394	Α	19950201	199547	
US 5420927	В1	19970204	US 94189248	Α	19940201	199711	

Priority Applications (No Type Date): US 94189248 A 19940201 Cited Patents: US 4326098; US 5214702; US 5261002; US 5299263; US 5307411 Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5420927 A 6 H04K-001/00

WO 9521495 A1 E 19 H04K-001/00

AU 9517394 A H04K-001/00 Based on patent WO 9521495

US 5420927 B1 3 H04K-001/00

### Abstract (Basic): US 5420927 A

The method for certifying pieces of data in a secure communications system with at least two levels of authorities, involves presenting a piece of data requiring certification to a first-level authority for inspection of a given property. If the piece of data passes the inspection of the first-level authority, the first-level authority sends to a higher authority a digital signature indicating that the piece of data has passed the inspection of the first-level authority.

If the digital signature of the first-level authority is correct, the higher authority issues a certificate, which does not include a signature of the first level authority, that the piece of data possesses the given property. The piece of data presented is a verification key of a digital signature scheme. The given property of the presented verification key is that a given user has chosen the verification key to be the public key.

ADVANTAGE - Facilitates widespread verification of digital signatures of users.

Dwg.0/0

Title Terms: CERTIFY; PUBLIC; KEY; DIGITAL; SIGNATURE; SECURE; COMMUNICATE; SYSTEM; REQUIRE; USER; PRESENT; AUTHORISE; VERIFICATION; KEY; CHECK; USER; SECRET; SIGN; KEY; ASSOCIATE; VERIFICATION; KEY

Derwent Class: W01

International Patent Class (Main): H04K-001/00

International Patent Class (Additional): H04L-009/00

File Segment: EPI

10/5/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014796657 \*\*Image available\*\* WPI Acc No: 2002-617363/200266

XRPX Acc No: N02-488562

Database system management method in distributed computing system, involves executing administrative function if object is not sensitive and function execution command is received from normal database

administrator

Patent Assignee: SAMAR V (SAMA-I)

Inventor: SAMAR V

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 20020078049 A1 20020620 US 2000741680 A 20001215 200266 B

Priority Applications (No Type Date): US 2000741680 A 20001215

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20020078049 A1 9 G06F-017/30

Abstract (Basic): US 20020078049 A1

NOVELTY - A command is received to perform an administrative function involving an object defined within the database system. The administrative function is performed, if the object is not sensitive and if the command is received from a **normal** database **administrator** (134) for the system. The function is restricted from execution if the object is sensitive and command is received from **security officer** (136).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) Computer readable storage medium storing database system management program; and
  - (2) Database system management apparatus.

USE - For managing database system storing sensitive, confidential data such as salary information, in distributed computing system.

ADVANTAGE - Provides the capability to store the sensitive data in encrypted form, while minimizing the number of database administrators needed to access the encrypted data, thereby reducing the security problem arising from allowing a large number of system administrators to have access to the encrypted data.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic view of the distributed computing system.

Database administrator (134)

Security officer (136)

pp; 9 DwgNo 1/4

Title Terms: DATABASE; SYSTEM; MANAGEMENT; METHOD; DISTRIBUTE; COMPUTATION; SYSTEM; EXECUTE; ADMINISTER; FUNCTION; OBJECT; SENSITIVE; FUNCTION; EXECUTE; COMMAND; RECEIVE; NORMAL; DATABASE; ADMINISTER

Derwent Class: T01

International Patent Class (Main): G06F-017/30

International Patent Class (Additional): G06F-012/14; H04L-009/32

File Segment: EPI

your application

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(Item 3 from file: 350)
10/5/3
DIALOG(R) File 350: Derwent WPIX
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013493341
            **Image available**
WPI Acc No: 2000-665284/200064
XRPX Acc No: N00-493048
  Cryptographic key distribution method for data communication, involves
 allocating private and public keys selected similar to selection of
 identity and sub- secret for subordinate administrators to final
  operators
Patent Assignee: TOTALFOERSVARETS FORSKNINGSINSTITUT (TOTA-N); FOERSVARETS
  FORSKNINGSANSTALT (FOER-N)
Inventor: BENGTSSON A
Number of Countries: 020 Number of Patents: 003
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                           Kind
                                                   Date
                                                            Week
WO 200064098
              A1 20001026 WO 2000SE721
                                            Α
                                                 20000414
                                                           200064 B
SE 9901358
                            SE 991358
              Α
                   20001017
                                            Α
                                                 19990416
                                                           200064
              C2 20011008 SE 991358
SE 515778
                                            Α
                                                 19990416
                                                          200161
Priority Applications (No Type Date): SE 991358 A 19990416
Patent Details:
Patent No Kind Lan Pg
                        Main IPC
                                     Filing Notes
WO 200064098 A1 E 21 H04L-009/32
   Designated States (National): JP US
  Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
  MC NL PT SE
SE 9901358
                      H04L-009/32
             Α
SE 515778
             C2
                      H04L-009/32
Abstract (Basic): WO 200064098 A1
       NOVELTY - Basic
                          secret and subordinate administrators (A1-A3)
   are selected by a main administrator (A). Identity in the form of
   unique prime number is provided to all administrators and associated
   final operators. Sub-secret is allocated to subordinate administrators
      Private and public keys selected similar to selection of identity
   and sub- secret for subordinate administrators , are allocated to
   final operators.
       USE - For data communication in communication network.
       ADVANTAGE - Implements automatic handling of chains of certificates
   in nodes of the type radiosets. Enables to form a common secret,
   replace change of certificates with identities in certification
   authority hierarchy and cause implicit certification of public keys.
       DESCRIPTION OF DRAWING(S) - The figure shows the hierarchical
   structure of main and subordinate administrators.
       Main administrator (A)
       Subordinate administrators (A1-A3)
       pp; 21 DwgNo 1/1
Title Terms: CRYPTOGRAPHIC; KEY; DISTRIBUTE; METHOD; DATA; COMMUNICATE;
 ALLOCATE; PRIVATE; PUBLIC; KEY; SELECT; SIMILAR; SELECT; IDENTIFY; SUB;
 SECRET; SUBORDINATE; FINAL; OPERATE
```

Derwent Class: W01

File Segment: EPI

International Patent Class (Main): H04L-009/32

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20/5/5
           (Item 4 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.
014708474
             **Image available**
WPI Acc No: 2002-529178/200256
Related WPI Acc No: 2002-665836; 2003-017013
XRPX Acc No: N02-419089
  Delegated administration of information in a database directory uses
  arbitrary group of users, which enables an administrator to form
  administrative domains and sub-domains using the arbitrary group of users
Patent Assignee: GENERAL ELECTRIC CO (GENE )
Inventor: AGGOUR K S; BARNETT J A; KORNFEIN M M; MEHRING D T; SEBASTIAN J;
  VIVIER B J
Number of Countries: 095 Number of Patents: 007
Patent Family:
Patent No
              Kind
                     Date
                             Applicat No
                                            Kind
                                                   Date
                                                             Week
                   20020725
WO 200257881
              Α2
                             WO 2002US1336
                                                 20020116
                                                            200256 B
                                             Α
KR 2002084184 A
                   20021104
                             KR 2002711985
                                                 20020913
                                                            200320
                                             Α
US 20030163438 A1 20030828
                              US 2000241645
                                             Ρ
                                                  20001019
                                                            200357
                             US 2001760995
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                                                 20010116
CN 1455905
                   20031112
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                             AU 2002239949
AU 2002239949 A1
                   20020730
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                                             Α
JP 2004525444 W
                   20040819
                             JP 2002558100
                                             Α
                                                 20020116
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                             WO 2002US1336
                                                 20020116
                                             Α
AU 2002239949 A8
                   20051013 AU 2002239949
                                             А
                                                 20020116
                                                           200611
Priority Applications (No Type Date): US 2001760995 A 20010116; US
  2000241645 P 20001019
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
WO 200257881 A2 E 45 G06F-000/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
   KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
   RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
KR 2002084184 A
                       G06F-017/40
US 20030163438 A1
                        G06F-007/00
                                      Provisional application US 2000241645
CN 1455905
                       G06F-017/60
AU 2002239949 A1
                       G06F-000/00
                                     Based on patent WO 200257881
JP 2004525444 W
                    75 G06F-012/00
                                     Based on patent WO 200257881
AU 2002239949 A8
                       G06F-017/60
                                     Based on patent WO 200257881
Abstract (Basic): WO 200257881 A2
        NOVELTY - Method for managing user information in a database
    directory, comprises: organizing the user information according to
    attribute values assigned to the information; specifying the organized
    user information into arbitrary group of users; and managing the user
    information associated with the arbitrary group of users.
        DETAILED DESCRIPTION - INDEPENDENT CLAIM included for the
    following:method for providing delegated administration; user community
    administration tool; system; computer-readable medium
```

USE - For computer databases .

ADVANTAGE - Enables an administrator to form administrative domains and sub-domains using the arbitrary group of users. Also the delegated administrative tool enables an administrator to delegate administration and various types of administrative authority to other users within a community of users. Administration tool provides the

capability identify many different and arbitrary sets of users whose management is to delegated so that administration can be performed for any type of organization or community, regardless of its structure.

DESCRIPTION OF DRAWING(S) - The diagram shows an example of a user community.

pp; 45 DwgNo 1/10

Title Terms: ADMINISTER; INFORMATION; **DATABASE**; DIRECTORY; ARBITRARY; GROUP; USER; ENABLE; ADMINISTER; FORM; ADMINISTER; DOMAIN; SUB; DOMAIN; ARBITRARY; GROUP; USER

Derwent Class: S05; T01

International Patent Class (Main): G06F-000/00; G06F-007/00; G06F-012/00;
G06F-017/40; G06F-017/60

International Patent Class (Additional): G06F-012/14; G06F-015/16;
 G06F-017/30

File Segment: EPI

30/5/3 (Item 3 from file: 347)

DIALOG(R) File 347: JAPIO

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04571116 \*\*Image available\*\*
FILE SECURITY PROTECTION METHOD

PUB. NO.: 06-243016 [JP 6243016 A] PUBLISHED: September 02, 1994 (19940902)

INVENTOR(s): ITO YUJI

APPLICANT(s): NIPPON DENKI COMPUTER SYST KK [000000] (A Japanese Company or

Corporation), JP (Japan)

APPL. NO.: 05-026387 [JP 9326387]

FILED: February 16, 1993 (19930216)

INTL CLASS: [5] G06F-012/00; G06F-012/14

JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units)

JOURNAL: Section: P, Section No. 1835, Vol. 18, No. 630, Pg. 157,

November 30, 1994 (19941130)

#### ABSTRACT

PURPOSE: To systematically and easily protect data on a file by adding a data class and a **security level** to the file attribute and prescribing the data class to which a user can access and the upper limit of the **security level**.

CONSTITUTION: When the user starts access to a system, a user management system 16 retrieves a user management data base 19 and reads an access right list obtained by combining the data class which the user can access and the upper limit of the security level into a memory. When the user requests the allocation of the file, a file management system 11 retrieves a file management data base 10, reads the data class and the security level of the file, recognizes that the data class is included in the access right list of the user and the security level does not exceed the upper limit of the security level of the user, and denies an allocation request when they violate the rules. Thus, a relation between data on the file and the user is arranged and systematic security which is easily managed is realized.

30/5/19 (Item 16 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2006 Thomson Derwent. All rts. reserv.

009674689 \*\*Image available\*\*
WPI Acc No: 1993-368242/199346

XRPX Acc No: N93-284310

Determining direct and indirect access privileges held by database user - displaying names of objects, identifying type of access to each object, and indicating whether such access privileges may be extended to others

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC )

Inventor: HOFFMAN R D

Number of Countries: 001 Number of Patents: 001

Patent Family:

• • • •

Patent No Kind Date Applicat No Kind Date Week
US 5261102 A 19931109 US 91678572 A 19910328 199346 B

Priority Applications (No Type Date): US 91678572 A 19910328

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5261102 A 12 G06F-015/401

Abstract (Basic): US 5261102 A

The method involves requesting a determination of objects to which a given user has access privileges. The objects to which the user has direct access privileges, and the objects to which the user has indirect access privileges are automatically determined. All access gps. to which the user belongs are automatically determined. The objects to which the access groups, determined above, have access privileges are automatically determined.

The type of access to each object to which the user has access privileges are automatically determined. It is determined whether the access privileges for each object to which the user has access privileges may be extended to others. The access privilege information, the type of access together with the respective object, and whether the access privileges may be extended to others, is provided to the user.

ADVANTAGE - ''Product independent'', can be imported to any database management program product. Implemented in non-procedural computer language.

Dwg.5/5

Title Terms: DETERMINE; DIRECT; INDIRECT; ACCESS; HELD; DATABASE; USER; DISPLAY; NAME; OBJECT; IDENTIFY; TYPE; ACCESS; OBJECT; INDICATE; ACCESS; EXTEND

Derwent Class: T01

International Patent Class (Main): G06F-015/401

File Segment: EPI

```
2:INSPEC 1898-2006/Mar W2
File
         (c) 2006 Institution of Electrical Engineers
File
       6:NTIS 1964-2006/Mar W1
         (c) 2006 NTIS, Intl Cpyrght All Rights Res
       8:Ei Compendex(R) 1970-2006/Mar W2
File
         (c) 2006 Elsevier Eng. Info. Inc.
      23:CSA Technology Research Database 1963-2006/Mar
File
         (c) 2006 CSA.
      34:SciSearch(R) Cited Ref Sci 1990-2006/Mar W2
File
         (c) 2006 Inst for Sci Info
File
      35:Dissertation Abs Online 1861-2006/Feb
         (c) 2006 ProQuest Info&Learning
      65:Inside Conferences 1993-2006/Mar 20
File
         (c) 2006 BLDSC all rts. reserv.
File
      94:JICST-EPlus 1985-2006/Dec W4
         (c) 2006 Japan Science and Tech Corp(JST)
File
      99:Wilson Appl. Sci & Tech Abs 1983-2006/Feb
         (c) 2006 The HW Wilson Co.
File 111:TGG Natl.Newspaper Index(SM) 1979-2006/Mar 13
         (c) 2006 The Gale Group
File 144: Pascal 1973-2006/Feb W4
         (c) 2006 INIST/CNRS
File 239:Mathsci 1940-2006/Apr
         (c) 2006 American Mathematical Society
File 256:TecInfoSource 82-2006/Feb
         (c) 2006 Info. Sources Inc
Set
        Items
                Description
S1
      2313296
                USER? ? OR ACCOUNT? ? OR USERNAME? ?
                S1(3N) (SENSITIV??? OR CLASSIFIED OR RESTRICT??? OR SECRET -
S2
        17710
             OR SECRECY OR PRIVILEG??? OR PRIVATE OR PRIVACY OR SECUR???)
S3
                ADMINISTRATOR? ? OR OFFICER? ? OR ADMIN? ? OR SYSADMIN? ? -
             OR AUTHORITY OR AUTHORITIES OR MANAGER? ?
                S3(3N) (NORMAL OR REGULAR OR BASIC OR USUAL OR UNCLASSIFIED
S4
             OR (NON OR "NOT")()(SENSITIVE OR CLASSIFIED OR RESTRICT??? OR
             SECRET OR PRIVILEG??? OR PRIVATE OR SECUR???))
S5
                S3(3N)(SPECIAL OR SECUR??? OR TOP OR HIGH??? OR SENSITIV???
              OR CLASSIFIED OR RESTRICT??? OR SECRET OR SECRECY OR PRIVILE-
             G??? OR PRIVATE)
                (S3 OR AUTHORIZ??? OR AUTHORIS??? OR AUTHORIZATION? ? OR A-
S6
        37380
             UTHORISATION? ? OR SECURITY OR ACCESS) (3N) (LEVEL? ? OR TIER? ?
              OR ROLE? ? OR TYPE? ?)
S7
           44
                S2 AND (S4 OR S5) AND S6
S8
           38
                RD (unique items)
S9
           31
                S8 NOT PY=2001:2006
S10
          100
                S4 AND S5
S11
           24
                S10 AND (S2 OR S6)
S12
           24
                RD (unique items)
S13
           24
                S12 NOT S9
S14
           20
                S13 NOT PY=2001:2006
S15
      1108341
                DATABASE? ? OR DATABANK? ? OR DATASTORE? ? OR DB OR DBMS OR
              RDBMS OR RDB OR DATA()(BASE? ? OR BANK? ? OR STORE? ?)
S16
            2
                S15 AND S10
S17
          190
                S15 AND S2 AND S6
S18
        20333
                S3(3N) (TWO OR THREE OR SECOND OR THIRD OR NEXT OR ANOTHER -
             OR ADDITIONAL OR MULTI OR MULTIPLE OR PLURAL ??? OR MANY OR SE-
             VERAL OR NUMEROUS OR VARIOUS)
S19
            0
                S18 AND S17
S20
         1094
                S18 AND S15
S21
           85
                S20 AND (S2 OR S6)
S22
           69
                RD (unique items)
```

•

```
S23
         57 S22 NOT PY=2001:2006
               S23 NOT RD=20001215:20060321
S24
         44
               S24 NOT (SS9 OR S14 OR S16)
S25 NOT PD=20001215:20060321
         44
S25
S26
          44
                SECURITY()OFFICER? ?
S27
         717
S28
          27
                S27 AND S2
                RD (unique items)
S29
          22
                S29 NOT PY=2001:2006
S30
          16
                S30 NOT (S9 OR S14 OR S16)
         14
S31
? logoff hold
       21mar06 11:37:16 User259273 Session D346.10
```

9/5/1 (Item 1 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

07636374 INSPEC Abstract Number: C2000-08-6130S-026

Title: An adaptable security manager for real-time transactions

Author(s): Son, S.H.; Zimmerman, R.; Hansson, J.

Author Affiliation: Dept. of Comput. Sci., Virginia Univ., Charlottesville, VA, USA

Conference Title: Proceedings 12th Euromicro Conference on Real-Time Systems. Euromicro RTS 2000 p.63-70

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2000 Country of Publication: USA xiii+281 pp.

ISBN: 0 7695 0734 4 Material Identity Number: XX-2000-01451

U.S. Copyright Clearance Center Code: 0 7695 0734 4/2000/\$10.00

Conference Title: Proceedings 12th Euromicro Conference on Real-Time Systems. Euromicro RTS 2000

Conference Date: 19-21 June 2000 Conference Location: Stockholm,

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The rising demand for real-time services over networks, such as Web-based information services, requires new approaches for balancing competing demands on limited resources. The BeeHive database system proposes a novel solution to this need by the use of adaptive real time, fault tolerance, quality of service and security services based on rules in individual objects. These rules prescribe tradeoffs of embedded alternate levels of service (and cost) when resource contention becomes a problem. The approach momentarily trades off the level of security to achieve the required real-time performance. In many situations, this is an acceptable, and even preferred, solution. We have developed an adaptable to provide alternate levels of communications security manager to multiple **users** and to dynamically adapt to real-time security performance conditions. In this paper, we present the design and evaluation of the proposed **security** manager that utilizes the notion of adaptable security services. (6 Refs)

Subfile: C

Descriptors: adaptive systems; distributed databases; fault tolerant computing; information resources; quality of service; real-time systems; security of data; telecommunication security; transaction processing Identifiers: adaptable security manager; real-time transactions; real-time network services; World Wide Web-based information services; competing demands; limited resources; BeeHive database system; adaptive real-time system; fault tolerance; service quality; adaptable security services; embedded rules; service levels; cost levels; resource contention; security level; real-time performance; multi- user communications security; real-time performance conditions; adaptable tradeoffs; multi-level security

Class Codes: C6130S (Data security); C6160B (Distributed databases) Copyright 2000, IEE

2:INSPEC DIALOG(R) File (c) 2006 Institution of Electrical Engineers. All rts. reserv. INSPEC Abstract Number: B2000-05-6210C-011, C2000-05-5620-015 Title: Dynamic monitoring for security management based on state transition Author(s): Heejin Jang; Sangwook Kim Journal: Journal of KISS(A) (Computer Systems and Theory) vol.26, p.1468-75 no.12 Publisher: Korea Inf. Sci. Soc, Publication Date: Dec. 1999 Country of Publication: South Korea CODEN: CKNOF2 ISSN: 1226-2315 SICI: 1226-2315(199912)26:12L.1468:DMSM;1-M Material Identity Number: E345-2000-004 Document Type: Journal Paper (JP) Language: Korean Treatment: Practical (P) Abstract: It is highly required to quickly detect the vulnerability of a computer network system and an appropriate action toward it should be followed as soon as possible for its security. It leads us to the need of a monitoring schema that can provide an integrated security management with carefully selected and analysed data through the computer network for its users. This paper presents a formal model of dynamic monitoring for security management. It provides the comprehensive security management using continuously changing **security** information, **user** interactions and dynamic activation of visual and monitoring objects. It enables system to manage computer systems accurately, efficiently officers and conveniently by reflecting the state transition and the transformation of concerns and a monitoring level of system security immediately. This model can be used as the basis of a monitoring platform. (3 Refs) Subfile: B C Descriptors: computer network management; security of data Identifiers: security management; state transition; integrated security management; monitoring schema; computer network; dynamic monitoring Class Codes: B6210C (Network management); C5620 (Computer networks and techniques); C6130S (Data security); C0310D (Computer installation management) Copyright 2000, IEE

(Item 2 from file: 2)

9/5/2

9/5/3 (Item 3 from file: 2) DIALOG(R) File 2: INSPEC (c) 2006 Institution of Electrical Engineers. All rts. reserv. INSPEC Abstract Number: C1999-12-6130S-031 Title: An integrity enforcement application design and operation framework in role -based access control systems: A session-oriented approach Author(s): HyungHyo Lee; BongNam Noh Author Affiliation: Dept. of Comput. Sci., Chonnam Nat. Univ., Kwangju, South Korea Conference Title: Proceedings of the 1999 ICPP Workshops on Collaboration and Mobile Computing (CMC'99). Group Communications (IWGC). Internet '99 (IWI'99). Industrial Applications on Network Computing (INDAP). Multimedia Network Systems (MMNS). Security (IWSEC). Parallel Computing '99 (IWPC'99). Parallel Execution on Reconfigurable Hardware (PERH) p.179-84 Editor(s): Panda, D.; Takizawa, M. Publisher: IEEE, Los Alamitos, CA, USA Publication Date: 1999 Country of Publication: USA xxi+622 pp. ISBN: 0 7695 0353 5 Material Identity Number: XX-1999-01656 U.S. Copyright Clearance Center Code: 0 7695 0353 5/99/\$10.00 Conference Title: Proceedings of the 1999 ICPP Workshops Conference Sponsor: Inf. Process. Soc. Japan (IPSJ); Int. Assoc. Comput. & Commun. (IACC); Univ. Aizu, Japan; Ohio State Univ., USA Conference Date: 21-24 Sept. 1999 Conference Location: Aizu-Wakamatsu, Japan Language: English Document Type: Conference Paper (PA) Treatment: Theoretical (T) control (RBAC) policy is being widely Abstract: Role -based access accepted not only as an access control policy but as a flexible permission management framework in various commercial environments. RBAC simplifies the process of security management by assigning permissions to roles not directly to individual users . As security administrators can design and manage security policies by changing the configuration of RBAC components to meet their organization's own security needs, RBAC is called policy-neutral and has ability to articulate enterprise-specific security policies. While most researches on RBAC are for defining, describing model in formal method and other important properties such as separation of duty, little work has been done on how applications should be designed and then executed in automated information systems based on RBAC security model. In this paper, we describe important, dynamic features of a session that can be used as a vehicle for building applications, and present a basic framework for session-oriented integrity enforcement application design and operation applicable to commercial environments. (15 Refs) Subfile: C Descriptors: access protocols; security of data Identifiers: integrity enforcement; access control; session-oriented approach; RBAC; access control policy; flexible permission management;

(Protocols)

security management; commercial environments Class Codes: C6130S (Data security); C5640

Copyright 1999, IEE

```
9/5/6
         (Item 6 from file: 2)
DIALOG(R) File 2: INSPEC
(c) 2006 Institution of Electrical Engineers. All rts. reserv.
          INSPEC Abstract Number: C9607-6130S-060
Title: Role -based access control in real systems
 Author(s): Parker, T.; Sundt, C.
 Journal: Information Systems Security
                                         vol.5, no.1
 Publisher: Auerbach Publications,
 Publication Date: Spring 1996 Country of Publication: USA
 ISSN: 1065-898X
 SICI: 1065-898X(199621)5:1L.26:RBAC;1-K
 Material Identity Number: F173-96001
                      Document Type: Journal Paper (JP)
 Language: English
 Treatment: Practical (P)
 Abstract:
             Role -based
                            access
                                   control can be used to support the
real-world access control requirements of a distributed system. This
article describes a role model as used in the context of a distributed
security infrastructure such as SESAME or OSF/DCE security. It is based on
practical experience in the use of roles in real products and shows how
role -based access control benefits both the user and the security
manager . It also highlights the key practical issues that needed to be
resolved in deriving this model. (7 Refs)
 Subfile: C
 Descriptors: authorisation; distributed processing; open systems
 Identifiers: role -based access control; real-world access control;
distributed system; role model; distributed security infrastructure; SESAME
; OSF/DCE; security manager ; user benefits
 Class Codes: C6130S (Data security); C6150N (Distributed systems software
 Copyright 1996, IEE
```

### 9/5/7 (Item 7 from file: 2) DIALOG(R) File 2: INSPEC (c) 2006 Institution of Electrical Engineers. All rts. reserv. 04181422 INSPEC Abstract Number: C88043164 Title: An EDP auditor's look at Top Secret Author(s): Decker, A. Journal: EDPACS vol.15, no.10 p.5-10Publication Date: April 1988 Country of Publication: USA CODEN: EDPCDF ISSN: 0736-6981 Language: English Document Type: Journal Paper (JP) Treatment: Practical (P); Product Review (R) Abstract: CA-TOP SECRET, if properly installed and implemented, it can comprehensive security for a variety of resources and MVS provide subsystems. The level of protection provided is directly related to the implementation and subsequent administration of the product. This article provides the auditor with the points that should be addressed during an audit of its implementation and administration. The author considers: ACIDs (accessor-IDs), modes of operation, ownership, level of access, Top Secret files, user attributes, reporting capabilities; administrative administrators ; auditing the authorities for auditors; security security database and other security concerns. (0 Refs) Subfile: C Descriptors: auditing; DP management; IBM computers; security of data Identifiers: IBM MVS/370 environments; IBM MVS/XA environments; CA-TOP SECRET; ACIDs; accessor-IDs; modes of operation; ownership; level of access; Top Secret files; user attributes; reporting capabilities; administrative authorities for auditors; security administrators; security database Class Codes: C0310D (Installation management); C6130 (Data handling

techniques); C6150J (Operating systems)

```
DIALOG(R) File
                 2:INSPEC
(c) 2006 Institution of Electrical Engineers. All rts. reserv.
            INSPEC Abstract Number: C81008901
 Title: Grant levels in an authorization mechanism
  Author(s): Paredaens, J.; Ponsaert, F.
  Author Affiliation: Dept. of Math., Univ. Instelling Antwerpen, Wilrijk,
Belgium
  Journal: Information Processing Letters vol.11, no.4-5
  Publication Date: 12 Dec. 1980 Country of Publication: Netherlands
  CODEN: IFPLAT ISSN: 0020-0190
  Language: English
                          Document Type: Journal Paper (JP)
  Treatment: Practical (P)
  Abstract: In some database systems the possibility exists to give grants,
and if necessary to revoke them afterwards. The creator of some file or
table is the only user who has the privilege to use that file or table,
unless he grants the privilege to another user. The main purpose of an MIS is to provide information to management. In this framework the
management has an hierarchical structure in which a level is associated to
every manager. A manager can give privileges to its direct inferiors.
Usually these privileges may be granted on and on only until a given maximal distance, down the hierarchy. A generalization is proposed: whenever a privilege is granted by a user, a level is associated indicating
the maximum distance at which a privilege can be granted. (3 Refs)
  Subfile: C
  Descriptors: database management systems; management information systems;
security of data
  Identifiers: authorization mechanism; database systems; grants;
hierarchical structure; MIS; management information systems; security of
  Class Codes: C6160 (Database management systems (DBMS)); C7100 (
```

(Item 8 from file: 2)

Business and administration)

9/5/10 (Item 2 from file: 6)

DIALOG(R) File 6:NTIS

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1568356 NTIS Accession Number: AD-A230 437/6

Example Secure System Specified Using the Terry-Wiseman Approach Harrold, C. L.

Royal Signals and Radar Establishment, Malvern (England).

Corp. Source Codes: 053783000; 409929

Sponsor: Defence Research Information Centre, Orpington (England).

Report No.: RSRE-90011; DRIC-BR-115326

Jul 90 65p

Languages: English

Journal Announcement: GRAI9112

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

Country of Publication: United Kingdom

This report presents the specification of operations for a secure document handling system (SERCUS). The specification uses the Terry-Wiseman Security Policy Model and therefore acts as an example of the modelling The specification uses the mathematical notation Z, and approach. consequently also acts as an example of the use of Z in specifying secure systems. However, it must be noted that an appreciation of SERCUS, the model and modelling approach can usefully be gained even if the formal specifications are not read. The Terry-Wiseman Model and its interpretation are given as an Annex to this report. SERCUS is essentially an electronic registry system which controls the creation of, and access to, classified documents and mail messages. In the usual way, the users are assigned clearances which limit their ability to observe and modify the information in the system. In addition to their clearance, the users have a designated role to play. The possible roles are security officer and ordinary user , although there were also registry clerks in the original, longer, specification. Certain operations may only be performed by users with the appropriate role . For example, only security officers may create new legal users or review journalled information and, in the original specification, only registry clerks could create files or add documents to files. Although the model does allow systems to be specified where individuals can have more than one role, this is not required in the SERCUS application, and each user is assigned a single fixed role.

Descriptors: \*Documents; Classified materials; Electronic equipment; Files(Records); Handling; Law enforcement; Mathematics; Model theory; Officer personnel; Specifications

Identifiers: \*Foreign technology; \*Data processing security; NTISDODXA Section Headings: 62GE (Computers, Control, and Information Theory--General)

9/5/15 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
(c) 2006 ProQuest Info&Learning. All rts. reserv.

01330764 ORDER NO: AADMM-81188

A DYNAMIC, EVENT-DEPENDENT DATA CONTROL: A USER-ROLE VIEW-BASED APPROACH

Author: MOHAMMED, IMTIAZ

Degree: M.A.SC. Year: 1992

Corporate Source/Institution: UNIVERSITY OF WATERLOO (CANADA) (1141)

Source: VOLUME 32/01 of MASTERS ABSTRACTS.

PAGE 279. 158 PAGES
Descriptors: COMPUTER SCIENCE

Descriptor Codes: 0984 ISBN: 0-315-81188-9

Preventing the disclosure, modification or destruction of information held in a database is one of the most important considerations of a Database Management System and it has been the subject of active research for the past several years.

While Mandatory Access Control (MAC) assigns security clearance levels (e.g., top secret, secret) to all of the data to achieve access control, Discretionary Access Control (DAC) assigns privileges to users customized to their responsibilities within the application. The fundamental limitation with the above mechanisms is that they are unable to deal with the changing roles of a user (based on the occurrence of an event) within an application. As a result, User - Role Based Security (URBS) has been proposed as a means of addressing the above weaknesses.

In this thesis we demonstrate how URBS can be used to augment the existing security mechanisms. We first extend and enhance the URBS concept (originally proposed for the object-oriented model) to the relational model. The extension and enhancement include: (1) defining the notion of events in an application; and (2) requiring the Database Administrator to manage the security scheme. We then implement dynamic, event-dependent user - role based security in a prototype that runs on the Oracle DBMS. The prototype is tested and the results are evaluated. Finally, we draw conclusions and offer suggestions for further study.

## 26/5/11 (Item 11 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

04602628 INSPEC Abstract Number: C90028391

Title: Analysis of the privacy model for the information system DORIS

Author(s): Biskup, J.; Graf, H.-W.

Author Affiliation: Inst. fur Inf., Hochschule Hildesheim, West Germany Conference Title: Database Security, II. Status and Prospects. Results of the IFIP WG 11.3 Workshop p.123-40

Editor(s): Landwehr, C.E.

Publisher: North-Holland, Amsterdam, Netherlands

Publication Date: 1989 Country of Publication: Netherlands viii+281 pp.

ISBN: 0 444 87483 6

Conference Sponsor: Queens Univ

Conference Date: 5-7 Oct. 1988 Conference Location: Kingston, Ont., Canada

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The information system DORIS has been designed to support privacy as the individual's right of informational self-determination. Technically it is based on careful adaptions of concepts for object oriented programming, relational databases and capability based operating systems. In the privacy model of DORIS there are two kinds of rights: authorities on roles (allowing operations) that are statically declared for groups (classes), and acquaintances (access capabilities) that are dynamically granted to specific persons (instances). Combined rights can also temporarily be made available. The dynamic distribution of rights within the system is analyzed by determining the largest set of acquaintances that a person can ever obtain. Known methods and results for capability based access control models are extended for treating the impact of the new concepts of authorities and availabilities. The analysis demonstrates that database administrators and privacy officers can reliably master the system. (10 Refs)

Subfile: C

Descriptors: data privacy; object-oriented programming; operating systems (computers); relational databases; security of data

Identifiers: information system; DORIS; object oriented programming; relational databases; capability based operating systems; privacy model; access control

Class Codes: C6160D (Relational DBMS); C6130 (Data handling techniques); C6150J (Operating systems)

```
31/5/4
         (Item 4 from file: 2)
DIALOG(R) File 2: INSPEC
(c) 2006 Institution of Electrical Engineers. All rts. reserv.
          INSPEC Abstract Number: C90008106
Title: VMS privilege masks-a method for controlling privileged tasks
 Author(s): Goatley, H.
 Author Affiliation: Clyde Digital Syst., Orem, UT, USA
 Journal: VAX Professional
                             vol.11, no.3 p.15-18
 Publication Date: June 1989 Country of Publication: USA
 CODEN: VAXPEN ISSN: 8750-9628
 Language: English
                     Document Type: Journal Paper (JP)
 Treatment: Practical (P)
                        for each account on a VMS system are usually
 Abstract: Privileges
determined by the system manager or security officer for a site. The
author discusses how such privileges are dispensed and their use to control
access to privileged functions. (O Refs)
  Subfile: C
  Descriptors: DEC computers; operating systems (computers); security of
data
 Identifiers: privileged task control; VMS system security; VAX system
security; privilege masks; VMS system; system manager; security officer
; privileges; privileged functions
 Class Codes: C6150J (Operating systems); C6130 (Data handling techniques
```